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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,239	06/27/2003	John B. Rowen	32181-1001	7741

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EXAMINER

MATZEK, MATTHEW D

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,239

Applicant(s)

ROWEN, JOHN B.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment and Arguments

1. The Amendment dated 9/14/2005, has been fully considered and has been entered into the Record. The previously applied prior art rejections have been withdrawn as the prior art did not teach the new limitation of impregnating the fabrics with the flame-retarding composition. The previously applied rejections under 35 U.S.C. § 112 2nd paragraph have been withdrawn due to amendment. The amended claims contain no new matter. The Arguments dated 9/14/2005 are moot as the all the previous rejections have been withdrawn. New grounds of rejection are as follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7, 8, 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Small, JR. et al. (US 2004/0226100 A1) in view of Pirig et al (US 6,054,513).

a. Small, JR. et al. teach a mattress with a barrier material comprising an intumescent material that is configured to swell and char in the presence of flame so as to form a barrier to the flame and to the heat generated by the flame. The barrier comprises a nonwoven fabric [0075] that may be impregnated with the flame and fire resistant material [0106]. The nonwoven flame and fire resistant material comprises cellulosic fibers that are equal to or less than 9 ounces per square yard (305 g/m², claim 1). The flame retarding composition comprises borates, phosphates, halogenated compounds,

silica [0080], blowing agents [0088], acrylic binder [0131], and carbonific compounds [0091]. The flame retardant chemical composition may be applied to the fabric substrate in an amount ranging from 5 to 100% solids by weight based on the weight of the barrier material [0096]. The Small, JR. et al publication is silent as to the basis weights of the adhesive binder and additive powders.

b. Pirig et al. disclose a fireproof coating, which forms an insulating layer and is based on carbon-forming substances forming a foam layer in the case of fire (Abstract). The disclosed coating comprises film-forming binders, blowing agents, and conventional assistants and additives, wherein said coating contains as blowing agents, a melamine salt and/or guanidine salts and/or microencapsulated melamine (Abstract). The fireproof coating preferably contains from 5 to 30 parts by weight of a film-forming binder, from 15 to 50 parts by weight of a substance forming a foam layer, from 5 to 25 parts by weight of a carbon-forming substance (carbonific), from 5 to 50 parts by weight of the melamine salt and/or of the guanidine salt (phosphate-based catalyst) and from 5 to 50 parts by weight of conventional assistants and additives (Example 7 and col. 2, lines 19-28).

c. The film-forming binder preferably contains homopolymers based on vinyl acetate, copolymers based on vinyl acetate, ethylene and vinyl chloride, copolymers based on vinyl acetate and the vinyl ester of a long-chain, branched carboxylic acid, copolymers based on vinyl acetate and di-n-butyl maleate, copolymers based on vinyl acetate and acrylic esters, copolymers based on styrene and acrylic esters and/or copolymers based on acrylic esters, vinyltoluene/acrylate copolymers, styrene/acrylate

polymers (col. 2, lines 43-54). Example 1 uses melamine as a blowing agent. Preferable carbonifics used in the applied invention include pentaerythritol, dipentaerythritol, tripentaerythritol and/or polycondensates of pentaerythritol (col. 2, lines 60-63). The fireproof coating preferably contains precipitated silicas and silicates (col. 2, lines 66-67). The use of ceramic fibers is disclosed and Example 7 teaches the use of a conventional additive, such as ceramic fibers, at five weight percent (col. 1, lines 25-27). The invention of Pirig et al. is disclosed as a coating but is silent as to the composition's use as an impregnant and the specific articles to be impregnated.

d. Since Pirig et al. and Small, JR. et al. are from the same field of endeavor (i.e. fire and flame retardant compositions) and contain common compositions, the purpose disclosed by Pirig et al. would have been recognized in the pertinent art of Small, JR. et al.

e. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to applied the flame retardant composition of Pirig et al. to the fabric of Small, JR. et al. The skilled artisan would have been motivated by the desire to have created a flame resistant barrier fabric for a mattress, impregnated with a common compositional make up as Small, JR. but with specific compositional weights for said impregnant.

f. The combination of the inventions of Pirig et al. and Small, JR. et al. yield an article with the instantly claimed fabric basis weight and an impregnant that meets the instantly claimed basis weights and compositional limitations.

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g. The application of the additive powder in a form of an aqueous slurry via the instantly claimed processes yields a structurally consistent product with that of the applied reference. Therefore, the limitations of claims 18-20 are found to be process limitations that do not or are not seen to materially affect the chemistry or structure of the claimed article.

h. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Small, JR. et al. (US 2004/0226100 A1) in view of Hill, JR. (US 5,225,464) in further view of Pirig et al. (US 6,054,513).

a. Small, JR. et al. teach a mattress with a barrier material comprising an intumescent material that is configured to swell and char in the presence of flame so as to form a barrier to the flame and to the heat generated by the flame. The barrier comprises a nonwoven fabric [0075] that may be impregnated with the flame and fire resistant material [0106]. The nonwoven flame and fire resistant material comprises cellulosic fibers that are equal to or less than 9 ounces per square yard (305 g/m^2 , claim 1). The flame retarding composition comprises borates, phosphates, halogenated compounds, silica [0080], blowing agents [0088], acrylic binder [0131], and carbonific compounds

[0091]. The flame retardant chemical composition may be applied to the fabric substrate in an amount ranging from 5 to 100% solids by weight based on the weight of the barrier material [0096]. The Small, JR. et al publication is silent as to the basis weights of the adhesive binder and additive powders.

b. Hill, JR. discloses an intumescent coating in which the fire retardant coating produces a hard, vitreous, insulating char when exposed to heat and flame (col. 1, lines 6-9). The applied invention of Hill, Jr. comprises the reaction product of phosphoric acid, melamine and monoammonium phosphate, with chlorinated paraffin, pentaerythritol and an adhesive (col. 2, lines 1-5). Monoammonium phosphate is the preferred phosphate-based catalyst (col. 3, lines 31-33). Melamine is the preferred blowing agent (col. 3, lines 43-46). Chlorinated paraffin containing at least 70% chlorine is the preferred halogen flame reducer (col. 3, lines 49-56). Pentaerythritol is the preferred carbon source and may be a monomer, dimer, trimer, or polymer (col. 3, lines 57-65). The adhesive or resin serves to bind the particulate components together and may be poly(vinyl acetate), poly(vinyl ester), polyester or epoxy resin (col. 3, line 66-col. 4, line 4). High melt temperature fibers such as ceramic fibers may be included into the coating composition to serve as a matrix reinforcer, heat sink, and fuel load diluter (col. 4, line 66- col. 5, line 2). The invention of Hill, JR. is silent as to the instantly claimed weight percentages of the flame retardant composition and the use of the composition as an impregnant for nonwoven materials.

c. Pirig et al. disclose a fireproof coating, which forms an insulating layer and is based on carbon-forming substances forming a foam layer in the case of fire (Abstract).

The disclosed coating comprises film-forming binders, blowing agents, and conventional assistants and additives, wherein said coating contains as blowing agents, a melamine salt and/or guanidine salts and/or microencapsulated melamine (Abstract). The fireproof coating preferably contains from 5 to 30 parts by weight of a film-forming binder, from 15 to 50 parts by weight of a substance forming a foam layer, from 5 to 25 parts by weight of a carbon-forming substance (carbonific), from 5 to 50 parts by weight of the melamine salt and/or of the guanidine salt (phosphate-based catalyst) and from 5 to 50 parts by weight of conventional assistants and additives (Example 7 and col. 2, lines 19-28).

d. The film-forming binder preferably contains homopolymers based on vinyl acetate, copolymers based on vinyl acetate, ethylene and vinyl chloride, copolymers based on vinyl acetate and the vinyl ester of a long-chain, branched carboxylic acid, copolymers based on vinyl acetate and di-n-butyl maleate, copolymers based on vinyl acetate and acrylic esters, copolymers based on styrene and acrylic esters and/or copolymers based on acrylic esters, vinyltoluene/acrylate copolymers, styrene/acrylate polymers (col. 2, lines 43-54). Example 1 uses melamine as a blowing agent. Preferable carbonifics used in the applied invention include pentaerythritol, dipentaerythritol, tripentaerythritol and/or polycondensates of pentaerythritol (col. 2, lines 60-63). The fireproof coating preferably contains precipitated silicas and silicates (col. 2, lines 66-67). The use of ceramic fibers is disclosed and Example 7 teaches the use of a conventional additive, such as ceramic fibers, at five weight percent (col. 1, lines 25-27). The invention of Pirig et al. is disclosed as a coating but is silent as to the composition's use

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as an impregnant and the specific articles to be impregnated as well as the use of chlorinated paraffin in the fireproof composition.

e. Since Small, JR. et al., Pirig et al. and Hill, JR. are from the same field of endeavor (i.e. fire and flame retardant compositions), the purposes disclosed by Hill, JR. and Pirig et al. would have been recognized in the pertinent art of Small, JR. et al.

f. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the coating of Hill, JR. with the weight percentages of Pirig et al. as the impregnant of the invention of Small, JR. et al. The skilled artisan would have been motivated by the desire to have created a flame resistant barrier fabric for a mattress, impregnated with a common compositional make up as Small, JR. but with specific compositional weights for said impregnant. The artisan would be further motivated to combine the Hill, JR. invention with that of Small, JR. and Pirig et al. because Hill, JR. discloses an intumescent coating in which the fire retardant coating produces a hard, vitreous, insulating char when exposed to heat and flame (col. 1, lines 6-9). This is an improvement over the applied inventions of Pirig et al. and Small, JR. as the invention of Hill, JR. produces a hard coating rather than a soft foam layer of protection.

g. The combination of the inventions of Pirig et al. and Small, JR. et al. yield an article with the instantly claimed fabric basis weight and an impregnant that meets the instantly claimed basis weights and compositional limitations.

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- i. The application of the additive powder in a form of an aqueous slurry via the instantly claimed processes yields a structurally consistent product with that of the applied reference. Therefore, the limitations of claims 18-20 are found to be process limitations that do not or are not seen to materially affect the chemistry or structure of the claimed article.
 - j. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292.
4. Claims 1-6 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Small, JR. et al. (US 2004/0226100 A1) in view of Scholz et al. (US 5,749,948).
- a. Small, JR. et al. teach a mattress with a barrier material comprising an intumescent material that is configured to swell and char in the presence of flame so as to form a barrier to the flame and to the heat generated by the flame. The barrier comprises a nonwoven fabric [0075] that may be impregnated with the flame and fire resistant material [0106]. The nonwoven flame and fire resistant material comprises cellulosic fibers that are equal to or less than 9 ounces per square yard (305 g/m², claim 1). The flame retarding composition comprises borates, phosphates, halogenated compounds, silica [0080], blowing agents [0088], acrylic binder [0131], and carbonific compounds [0091]. The flame retardant chemical composition may be applied to the fabric substrate

in an amount ranging from 5 to 100% solids by weight based on the weight of the barrier material [0096]. The Small, JR. et al publication is silent as to the basis weights of the adhesive binder and additive powders.

b. Scholz et al. discloses an expandable, flame-retardant coating materials comprising 4-25 weight percent film-forming binder, 10-40 weight percent ammonium polyphosphate (phosphate-based catalyst), 8-40 weight percent carbonific, 6-25 weight percent blowing agent, 0-25 weight percent filler (Abstract). The disclosed examples teach the use of pentaerythritol as a carbonific, melamine as a blowing agent, chlorinated paraffin as a secondary carbonific, and claim 1 teaches the use of vinyl acetate-vinyl ester copolymer, an anionic, aliphatic polyester-polyurethane, a styrene-acrylate copolymer, a homopolymer based on vinyl acetate, and mixtures thereof as binder. The invention of Scholz et al. is disclosed as a coating but is silent as to the composition's use as an impregnant and the specific articles to be impregnated.

c. Since Scholz et al. and Small, JR. et al. are from the same field of endeavor (i.e. fire and flame retardant compositions), the purpose disclosed by Scholz et al. would have been recognized in the pertinent art of Small, JR. et al.

d. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the composition of Scholz et al. as the impregnant of the invention of Small, JR. et al. The skilled artisan would have been motivated by the desire to have created a flame resistant barrier fabric for a mattress, impregnated with a common

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compositional make up as Small, JR. but with specific compositional weights for said impregnant.

e. The combination of the inventions of Scholz et al. and Small, JR. et al. yield an article with the instantly claimed fabric basis weight and an impregnant that meets the instantly claimed basis weights and compositional limitations.

f. The application of the additive powder in a form of an aqueous slurry via the instantly claimed processes yields a structurally consistent product with that of the applied reference. Therefore, the limitations of claims 18-20 are found to be process limitations that do not or are not seen to materially affect the chemistry or structure of the claimed article.

g. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re*

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Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-20 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of 1-17 of U.S. Patent No. 6,960,388. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to common flame resistant compositions for use in fabrics.

6. Claims 1-20 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,930,138. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to common flame resistant compositions for use in fabrics.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdm

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